

FIG. 1 as a single processor, in some example embodiments the processor 20 may comprise a plurality of processors or processing cores.

[0042] Signals sent and received by the processor 20 may include signaling information in accordance with an air interface standard of an applicable cellular system, and/or any number of different wireline or wireless networking techniques, comprising but not limited to Wi-Fi, wireless local access network (WLAN) techniques, such as, Institute of Electrical and Electronics Engineers (IEEE) 802.11, 802.16, and/or the like. In addition, these signals may include speech data, user generated data, user requested data, and/or the like.

[0043] The apparatus 130 may be capable of operating with one or more air interface standards, communication protocols, modulation types, access types, and/or the like. For example, the apparatus 130 and/or a cellular modem therein may be capable of operating in accordance with various first generation (1G) communication protocols, second generation (2G or 2.5G) communication protocols, third-generation (3G) communication protocols, fourth-generation (4G) communication protocols, Internet Protocol Multimedia Sub-system (IMS) communication protocols (for example, session initiation protocol (SIP) and/or the like. For example, the apparatus 130 may be capable of operating in accordance with 2G wireless communication protocols IS-136, Time Division Multiple Access TDMA, Global System for Mobile communications, GSM, IS-95, Code Division Multiple Access, CDMA, and/or the like. In addition, for example, the apparatus 130 may be capable of operating in accordance with 2.5G wireless communication protocols General Packet Radio Service (GPRS), Enhanced Data GSM Environment (EDGE), and/or the like. Further, for example, the apparatus 130 may be capable of operating in accordance with 3G wireless communication protocols, such as, Universal Mobile Telecommunications System (UMTS), Code Division Multiple Access 2000 (CDMA2000), Wideband Code Division Multiple Access (WCDMA), Time Division-Synchronous Code Division Multiple Access (TD-SCDMA), and/or the like. The apparatus 130 may be additionally capable of operating in accordance with 3.9G wireless communication protocols, such as, Long Term Evolution (LTE), Evolved Universal Terrestrial Radio Access Network (E-UTRAN), and/or the like. Additionally, for example, the apparatus 130 may be capable of operating in accordance with 4G wireless communication protocols, such as LTE Advanced and/or the like as well as similar wireless communication protocols that may be subsequently developed.

[0044] It is understood that the processor 20 may include circuitry for implementing audio/video and logic functions of apparatus 130. For example, the processor 20 may comprise a digital signal processor device, a microprocessor device, an analog-to-digital converter, a digital-to-analog converter, and/or the like. Control and signal processing functions of the apparatus 130 may be allocated between these devices according to their respective capabilities. The processor 20 may additionally comprise an internal voice coder (VC) 20a, an internal data modem (DM) 20b, and/or the like. Further, the processor 20 may include functionality to operate one or more software programs, which may be stored in memory. In general, processor 20 and stored software instructions may be configured to cause apparatus 130 to perform actions. For example, processor 20 may be capable of operating a connectivity program, such as, a web browser. The connectivity program may allow the apparatus 130 to transmit and receive

web content, such as location-based content, according to a protocol, such as, wireless application protocol, WAP, hypertext transfer protocol, HTTP, and/or the like.

[0045] Apparatus 130 may also comprise a user interface including, for example, an earphone or speaker 24, a ringer 22, a microphone 26, a display 28, a user input interface, and/or the like, which may be operationally coupled to the processor 20. The display 28 may, as noted above, include a touch sensitive display, where a user may touch and/or gesture to make selections, enter values, and/or the like. The processor 20 may also include user interface circuitry configured to control at least some functions of one or more elements of the user interface, such as, the speaker 24, the ringer 22, the microphone 26, the display 28, and/or the like. The processor 20 and/or user interface circuitry comprising the processor 20 may be configured to control one or more functions of one or more elements of the user interface through computer program instructions, for example, software and/or firmware, stored on a memory accessible to the processor 20, for example, volatile memory 40, non-volatile memory 42, and/or the like. The apparatus 130 may include a battery for powering various circuits related to the mobile terminal, for example, a circuit to provide mechanical vibration as a detectable output. The user input interface may comprise devices allowing the apparatus 130 to receive data, such as, a keypad 30 (which can be a virtual keyboard presented on display 28 or an externally coupled keyboard) and/or other input devices.

[0046] Moreover, the apparatus 130 may include a short-range radio frequency (RF) transceiver and/or interrogator 64, so data may be shared with and/or obtained from electronic devices in accordance with RF techniques. The apparatus 130 may include other short-range transceivers, such as an infrared (IR) transceiver 66, a Bluetooth (BT) transceiver 68 operating using Bluetooth wireless technology, a wireless universal serial bus (USB) transceiver 70, and/or the like. The Bluetooth transceiver 68 may be capable of operating according to low power or ultra-low power Bluetooth technology, for example, Wibree, radio standards. In this regard, the apparatus 130 and, in particular, the short-range transceiver may be capable of transmitting data to and/or receiving data from electronic devices within a proximity of the apparatus, such as within 10 meters. The apparatus 130 including the WiFi or wireless local area networking modem may also be capable of transmitting and/or receiving data from electronic devices according to various wireless networking techniques, including 6LoWpan, Wi-Fi, Wi-Fi low power, WLAN techniques such as IEEE 802.11 techniques, IEEE 802.15 techniques, IEEE 802.16 techniques, and/or the like.

[0047] The apparatus 130 may comprise memory, such as, a subscriber identity module (SIM) 38, a removable user identity module (R-UM), and/or the like, which may store information elements related to a mobile subscriber. In addition to the SIM, the apparatus 130 may include other removable and/or fixed memory. The apparatus 130 may include volatile memory 40 and/or non-volatile memory 42. For example, volatile memory 40 may include Random Access Memory (RAM) including dynamic and/or static RAM, on-chip or off-chip cache memory, and/or the like. Non-volatile memory 42, which may be embedded and/or removable, may include, for example, read-only memory, flash memory, magnetic storage devices, for example, hard disks, floppy disk drives, magnetic tape, optical disc drives and/or media, non-volatile random access memory (NVRAM), and/or the like.